BTL

a guide to laser therapy

E.N.T.

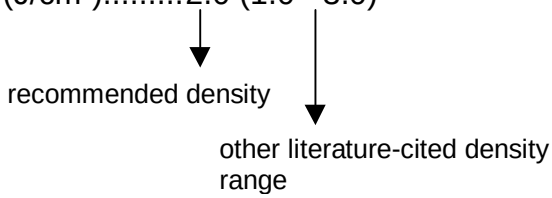
V5.01MK2000/03/07EN

List of Diagnoses:

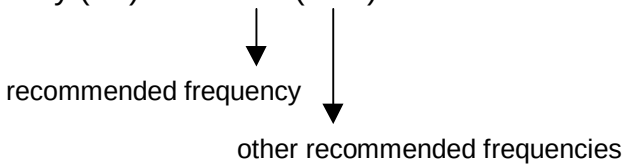
Cicatrix recens
Furunculus
Herpes simplex
Otitis media acuta
Perforatio membranee tympani traumatici
Pharyngitis
Rhinitis vasomotorica
Sanatio postoperativa
Sanatio posttrepanationis
Sinusitis
Tinnitus
Tonsillectomia
Tonsillitis
Tonsillopharyngitis

Comments:

- Recommended density (J/cm^2).....2.0 (1.0 - 3.0)



- Recommended frequency (Hz).....10.0 (9.12)



- 1st part of therapy
  2nd part of therapy refers to therapy consisting of 2 different programs.

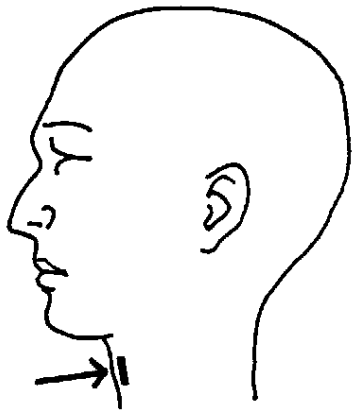
  - Therapy time at max. output (min.) therapy time in minutes if maximal output of probe and irradiated area 1cm^2 are set.
    Considered maximal output of red probe is 30 mW, infrared probe 200 mW.
    Warning! You must adjust the area value according to the size of irradiated area. Change of area will influence therapy time.

This Guide to laser therapy has been written in cooperation with top medical specialists in the field of laser therapy. It has been based on physicians' everyday experience with use of therapy lasers in their practice, as well as on publicly available articles and books on the subject.

Diagnosis: Cicatrix recens

(fresh scar)

Programme No: 0600, 0601



Recommended density (J/cm^2)	4.0 (2.0 - 7.0) 1st part of therapy 4.0 2nd part of therapy
Recommended frequency (Hz)	cont. 1st part of therapy 5.0 2nd part of therapy
Therapy time at max. output (in min.)	2.13 + 2.46
Number of treatments per week	daily - 3x per week
Number of treatments total	5 - 15
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

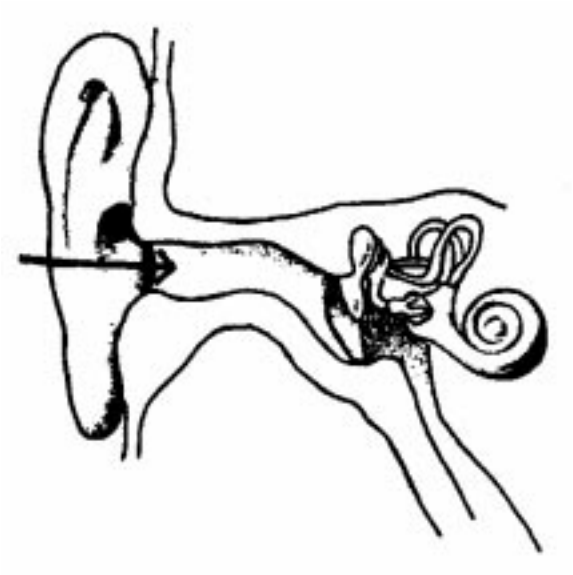
Comment:

- Irradiate the entire scar.
- Begin irradiation immediately after surgery.
- Acute cases: set a lower dose and irradiate more frequently.
- Chronic cases: set a higher dose and irradiate less frequently.
- Good laser therapy results can be achieved with burns, ulcers and keloid scars.
- According to some experts it is advisable to irradiate the planned area 2 - 3 days in advance, or during the actual surgery.
- Improved oxidation in the cells effects microcirculation in the affected tissue, and improves cellular energy use and waste drainage.
- Laser treatment has an analgesic effect; also reduces infiltration, swelling and haematoma.
- 1st part of therapy and 2nd part of therapy should be understood as two parts of one therapy session.

Diagnosis: Furunculus

(furuncle)

Programme No: 0602



Recommended density (J/cm^2)	2.0 (2.0 - 2.5)
Recommended frequency (Hz)	1.7
Therapy time at max. output (in min.)	1.23
Number of treatments per week	3
Number of treatments total	3
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

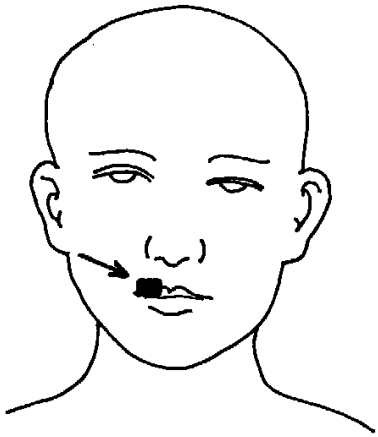
Comment:

- Irradiate affected areas.
- Results are better when started in the early stages of the condition.
- Laser treatment has an anti-inflammatory effect

Diagnosis: Herpes – simplex

(herpes - mostly in the facial area)

Programme No: 0603, 0604



Recommended density (J/cm^2)	3.0 (2.0 - 4.0) 1st part of therapy 3.0 2nd part of therapy
Recommended frequency (Hz)	cont. 1st part of therapy 4.7 (9.12, 5.0) 2nd part of therapy
Therapy time at max. output (in min.)	1.40 + 2.05
Number of treatments per week	daily – every other day
Number of treatments total	3 - 5
Recommended BTL probe	red/infrared
Recommended output of BTL probe	30 mW/200 mW

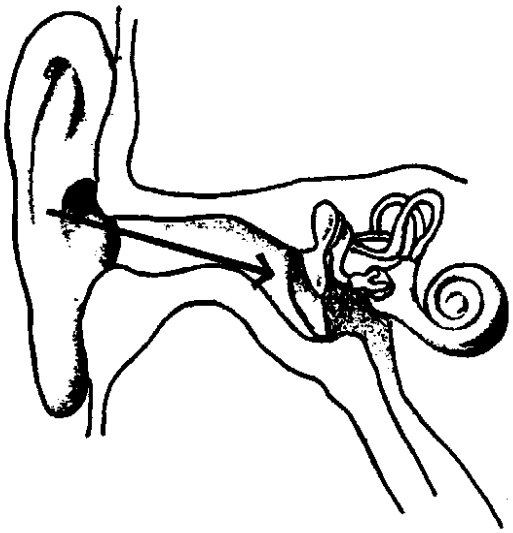
Comment:

- Probe: use red light for lips and mucosa, and infrared light for skin.
- Apply at the first signs of tension in the tissue.
- Results are better when started in the early stages of the condition.
- Apply at the edges of the lesion.
- A strong dose must be applied because herpes can worsen if only a stimulatory density is used.
- During the same therapy session, irradiate first with continuous mode and then with pulse frequency.
- Irradiation reduces pain.
- Normal healing takes 8-12 days, but only 2-4 days with laser therapy.
- Reduces recurrence of the condition.
- Prevents the forming of blisters.
- Laser therapy has a healing, analgesic anti-edema effect.
- 1st part of therapy and 2nd part of therapy should be understood as two parts of one therapy session.

Diagnosis: Otitis media acuta

(otitis of middle ear acuta)

Programme No: 0605, 0606



Recommended density (J/cm^2)	5.0
Recommended frequency (Hz)	cont. 1st part of therapy 5.0 2nd part of therapy
Therapy time at max. output (in min.)	0.25 + 0.32
Number of treatments per week	3
Number of treatments total	3 - 5
Recommended BTL probe	infrared
Recommended output of BTL probe	200 mW

Comment:

- Laser treatment has an anti-inflammatory effect.
- Pain will stop following the first irradiation session, but begin again a few hours later. Laser therapy must be combined with antibiotics.
- At the beginning of laser therapy, irradiate daily or every two days. After initial treatments, increase the time duration between sessions.
- Apply laser light with special optical attachment.
- 1st part of therapy and 2nd part of therapy should be understood as two parts of one therapy session.

Diagnosis: Otitis media chronica

(otitis of middle ear chronica)

Programme No: 0607

Recommended density (J/cm^2)	7.0
Recommended frequency (Hz)	5.0
Therapy time at max. output (in min.)	0.44
Number of treatments per week	3 (daily when relapse)
Number of treatments total	3 - 5
Recommended BTL probe	infrared
Recommended output of BTL probe	200 mW

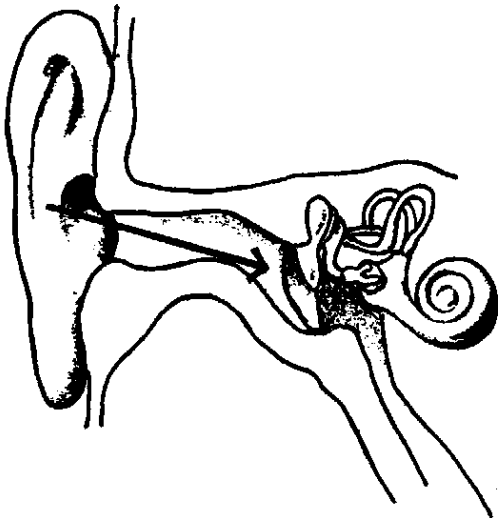
Comment:

- Irradiate affected area.
- Laser treatment in combination with medical drugs has an anti-inflammatory effect.
- Laser therapy has an analgesic, anti-inflammatory effect, and hastens healing.
- Apply laser light with special optical attachment.

Diagnosis: Perforatio membranae tympani traumatici

(perforation membrana tympanic traumatic)

Programme No: 0608



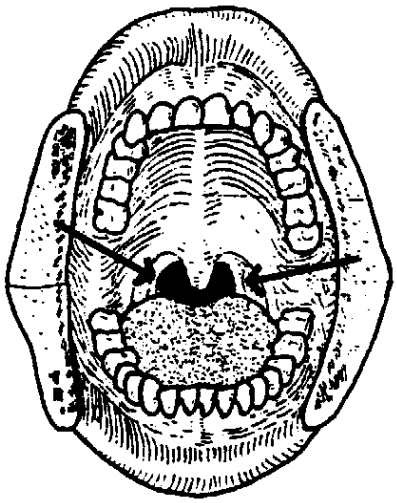
Recommended density (J/cm^2)	1.6
Recommended frequency (Hz)	8.4
Therapy time at max. output (in min.)	1.06
Number of treatments per week	every other day
Number of treatments total	2 - 4
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

Comment:

- For non-inflamed perforation of the tympanic membrane, apply laser therapy for 5 - 7 sessions.
- Laser therapy has an analgesic effect.
- Apply laser light with special optical attachment.

Diagnosis: **Pharyngitis**

Programme No: 0609



Recommended density (J/cm^2)	2.0
Recommended frequency (Hz)	5.0
Therapy time at max. output (in min.)	1.23
Number of treatments per week	every other day
Number of treatments total	5
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

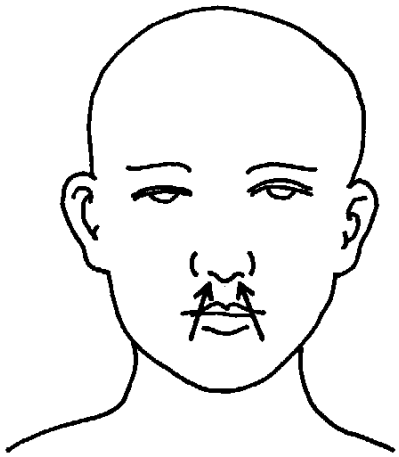
Comment:

- Laser therapy decreases the pain of swallowing.
- Irradiate the affected area where the edema is located, and where there is red inflammation around the tonsillar pillar. Also apply under both sides of the mandibular arc.
- Apply laser light with special optical attachment.

Diagnosis: Rhinitis vasomotorica

(rhinitis vasomotor)

Programme No: 0610



Recommended density (J/cm^2)	2.0
Recommended frequency (Hz)	4.5 (5.0)
Therapy time at max. output (in min.)	0.19
Number of treatments per week	2
Number of treatments total	3 - 10
Recommended BTL probe	infrared
Recommended output of BTL probe	200 mW

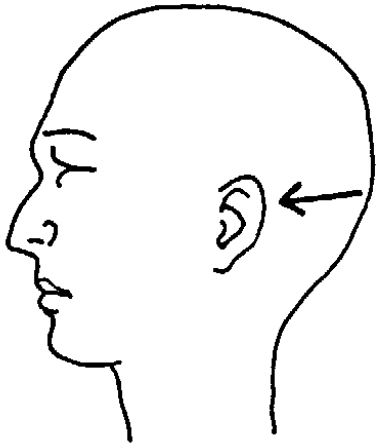
Comment:

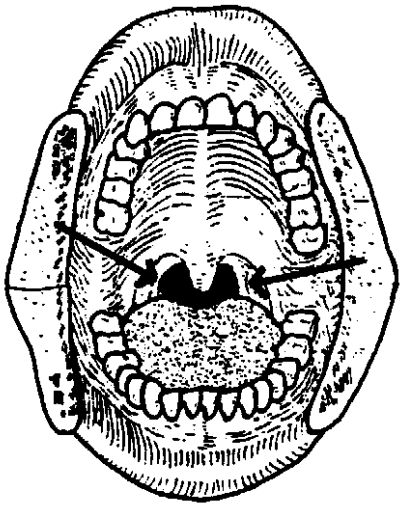
- Laser therapy brings better results from a rhinoscopy by decreasing edema of the mucosa and secretion.
- Apply laser light with special optical attachment.

Diagnosis: Sanatio postoperativa

(post-surgical healing)

Programme No: 0611





Recommended density (J/cm^2)	2.0 (1.0 - 3.0)
Recommended frequency (Hz)	5.0 (5.0 - 10.0)
Therapy time at max. output (in min.)	1.23
Number of treatments per week	every other day
Number of treatments total	3 - 5
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

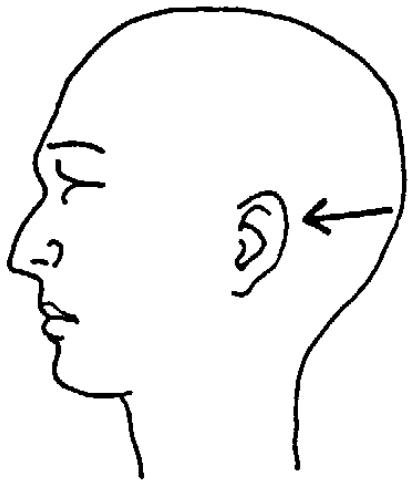
Comment:

- Accelerates healing of the wound.
- Improves blood supply.
- Reduces complications.
- Positive effects are usually visible after the second therapy.
- Laser therapy has an analgesic, anti-inflammatory, bio-stimulatory and anti-edema effect.
- Apply laser light with special optical attachment.

Diagnosis: Sanatio posttrepanationis

(post-trepanation healing)

Programme No: 0612



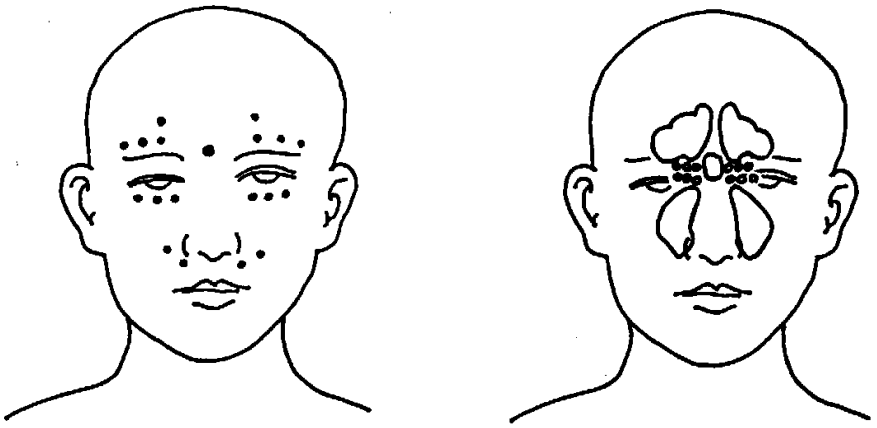
Recommended density (J/cm^2)	1.6
Recommended frequency (Hz)	5.0
Therapy time at max. output (in min.)	1.06
Number of treatments per week	every other day
Number of treatments total	5 - 9
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

Comment:

- Apply laser therapy after irrigation of the trepanation cavity.
- Laser therapy has an antiseptic effect.

Diagnosis: Sinusitis acuta, chronica

Programme No: 0613, 0614



Recommended density (J/cm^2) - acuta - chronica	 5.0 2.0
Recommended frequency (Hz)	5.0
Therapy time at max. output (in min.)	0.32
Number of treatments per week	2 - 3
Number of treatments total	5 - 10
Recommended BTL probe	infrared
Recommended output of BTL probe	200 mW

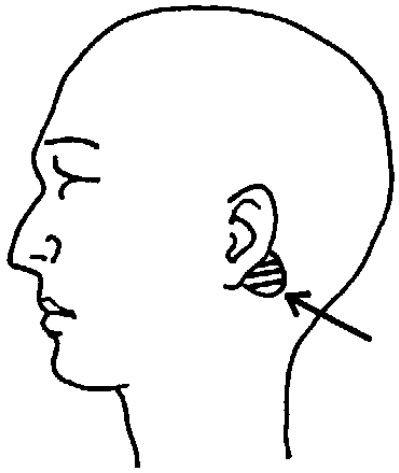
Comment:

- For acute sinusitis, apply laser power of 5 - 6 J/cm^2. Apply 4 J/cm^2 on the infraorbital foramen and the remaining power on the area above the second upper molar.
- For persistent conditions, apply laser therapy with 10 session cycles.
- Laser therapy has an analgesic and anti-inflammatory effect.

Diagnosis: **Tinnitus**

(noise in the ears)

Programme No: 0615, 0616



Recommended density (J/cm^2)	10.0 (10.0 - 12.0)
Recommended frequency (Hz)	cont. 1st part of therapy 5.0 (9.12) 2nd part of therapy
Therapy time at max. output (in min.)	0.51 + 1.04
Number of treatments per week	1 - 2
Number of treatments total	5 - 10
Recommended BTL probe	infrared
Recommended output of BTL probe	200 mW

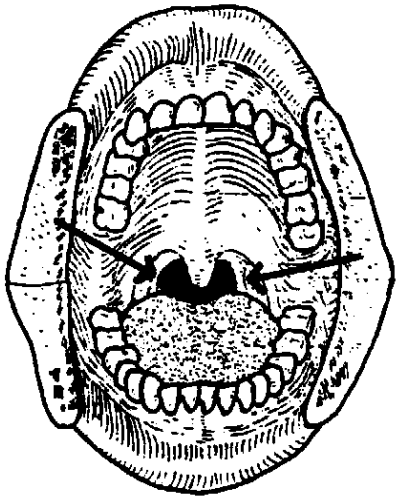
Comment:

- Combine treatment with manipulative therapy of the spine.
- Irradiate mastoid areas.
- Focus laser beam in the direction of the opposite orbit.
- 1st part of therapy and 2nd part of therapy should be understood as two parts of one therapy session.

Diagnosis: **Tonsillectomia**

(tonsillectomy)

Programme No: 0617



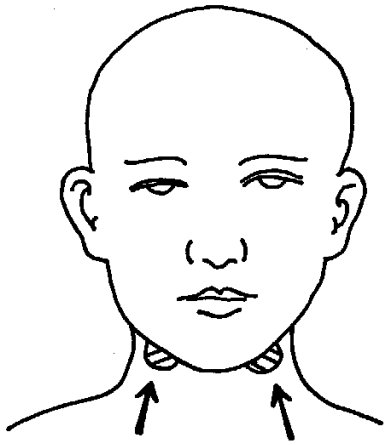
Recommended density (J/cm^2)	2.0
Recommended frequency (Hz)	9.12
Therapy time at max. output (in min.)	1.23
Number of treatments per week	2
Number of treatments total	3
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

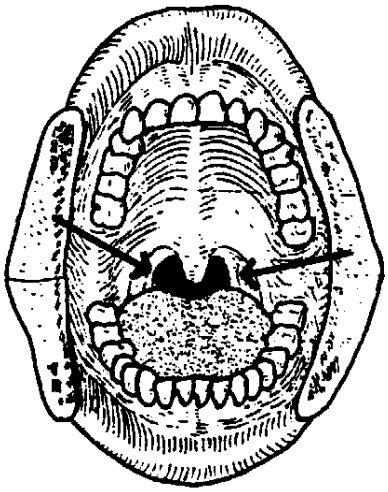
Comment:

- Apply laser light with special optical attachment.
- Laser therapy has an analgesic effect and hastens healing.
- Watch for hematorrhea.

Diagnosis: Tonsillitis

Programme No: 0618





Recommended density (J/cm^2)	5.0
Recommended frequency (Hz)	5.0 (9.12)
Therapy time at max. output (in min.)	3.28
Number of treatments per week	daily - 2x per week
Number of treatments total	4 - 10
Recommended BTL probe	red/infrared
Recommended output of BTL probe	30 mW/200 mW

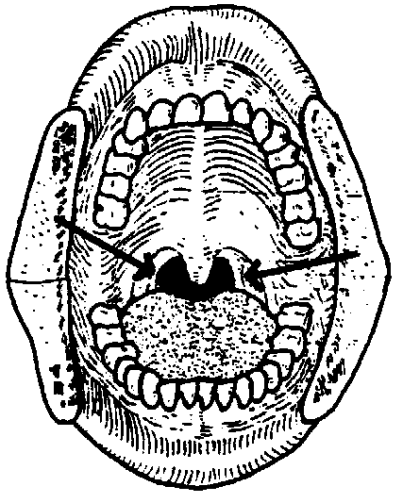
Comment:

- Irradiate directly the tonsils or apply the laser light through the regio submandibularis.
- Indication: tonsilitis chronica et recidivans.
- The laser therapy reduces recurrence of the condition.
- For easy course of the affection use the laser therapy. The confinement to bed is recommended for the pyrexia.
- If there is no inflammation after 2 month, the laser therapy had a positive effect. The hyperthermia and exacerbation of the process reappeared by 5% of patients. The laser radiation is considered as the provocation test.

Diagnosis: Tonsillopharyngitis

(simultaneous tonsillitis and pharyngitis)

Programme No: 0619



Recommended density (J/cm^2)	5.0
Recommended frequency (Hz)	5.0
Therapy time at max. output (in min.)	3.28
Number of treatments per week	2
Number of treatments total	4 - 6
Recommended BTL probe	red
Recommended output of BTL probe	30 mW

Comment:

- Positive results occur after 2 sessions.
- Simultaneous tonsillitis and pharyngitis is very often recidivative and can reoccur up to 6 times a year. Laser therapy reduces recurrence to 0 - 2 times per year.
- Laser therapy has an anti-inflammatory effect.
- Apply laser light with special optical attachment.